

XIV. *Illustrations of several additional species of Lucanidæ in the Collection of Major F. J. Sidney Parry.* By J. O. WESTWOOD, M.A., F.L.S.

[Read 16th March, 1874.]

I AM again indebted to Major F. J. S. Parry for an opportunity of describing several interesting species of *Lucanidæ* in his very rich collection of these insects, and of figuring two others (hitherto unrepresented), which have been already described by him.

The first of these species is so unlike every known insect in the family as to render the establishment of a new genus or sub-genus for its reception necessary. The second is a valuable addition to the genus *Heterochthes*, known hitherto by a single species of so great rarity that I believe only a single male and one of the opposite sex are in any cabinet. The fourth species appears to be a strangely developed specimen of the male of *Odontolabis striatus*.

*Eulepidius luridus.* (Pl. III. fig. 1.)

*Cyclommato* et *Prosopocoilo* proximus.

Character subgenericus.—Corpus undique squamosum. Caput transverso-quadratum. Oculi septo antice paullo incisi. Prosternum simplex. Maxillæ inermes. Mentum transversum palporum basin obtegens. Mandibulæ ♂ capitis longitudine, basi intus in dentem magnum planum triangularem dilatatae. Tibiæ 2 anticae apice extus bifidæ. Tarsi subtus setosi.

Char. spec.—Niger, punctatus, squamulis minutis luteo-sericeis undique tectus; capite prothorace minori lateribus rectis, oculis antice cantho parum incisis, margine antico clypei late emarginato depresso, et depressione centrali notato; mandibulis capitis longitudine, basi late trigonis, in medio subito intus angulatis, apicibus acutis simplicibus; pedibus parum elongatis, tibiis anticis apice externo producto bifido, 4 posticis simplicibus; tarsis subtus luteo-setosis, prosterno simplici postice haud angulato retro producto.

Long. corp. lin.  $8\frac{1}{2}$ ; mand. lin.  $1\frac{1}{2}$ .

Habitat Borneo. In Mus. Parry.

This curious species is about the size of *Cacostomus squamosus*, agreeing with it in the small scales with which it is everywhere covered; the mandibles, eyes (having only a slight incision in front), and especially the remarkable mandibles, however, entirely separate it from that genus. The head is smaller than the prothorax, transverse, with the sides nearly straight and parallel; the eyes are not prominent, and the sides of the head in front of the eyes form an obtuse angle; the front of the head is deeply emarginate and the middle of the disk of the head between the eyes is marked by two raised spaces. The antennæ are of moderate length, the three terminal joints comparatively small, the preceding (seventh) joint not being larger than the sixth; the mandibles are about the length of the head, they are flat above, the basal half being dilated into a large triangular tooth, of which the anterior margin is slightly produced in the middle; the inner basal angle is produced inwardly into an acute point, and the outer base extends outwardly, forming a right angle; beyond the middle they are suddenly angulated inwardly, terminating in an acute point; their upper surface is punctured and setose; the mentum is transverse, deeply punctured, with the anterior lateral angles rounded, the extremity of the labial palpi being alone visible beyond its fore margin. The maxillæ have the outer lobe very setose, the inner lobe minute and simple. The prothorax is wider than long, the lateral margin rounded and serrated, the posterior half of the lateral margin being obliquely truncate; the middle of the disk in front has a slight longitudinal depression; the scutellum is minute and semicircular. The elytra are rather narrower at the base than the prothorax, and have the anterior lateral angles angulated; the disk is opaque, being covered with minute punctures, each emitting a luteous squamula; on each may also be perceived four ill-defined, slender, longitudinal, slightly-raised carinæ. The body beneath is covered with coarser setigerous punctures, except on the abdomen, where they are very fine and small. The prosternum is simple, gradually narrowed between the bases of the fore legs, behind which it does not form a produced raised angle. The anterior tibiæ are moderately long and slender, the apex externally being prolonged and terminated by two spines. The four posterior tibiæ are externally unarmed, and the tarsi are clothed on the under-side with long fulvous hairs.

The scales on the pronotum form seven more decided patches.

*Heterochthes Andamanensis*. (Pl. III. fig. 2.)

Latus, niger, elytris nitidis lævibus, capite prothoracis latitudine, mandibulis capite dimidio longioribus, prope basin arcuatis, dente apicali incurvo, tuberculoque minuto subapicali armatis; oculis septo omnino divisis, occipite in medio postice impressione parvâ oblongâ notato; tibiis anticis extus 5-6-dentatis; 4 posticis extus in medio inermibus, prosterno in medio longitudinaliter canaliculato.

Long. corp. lin. 17; mandib. lin.  $6\frac{1}{2}$ .

Habitat ins. Andamanenses. In Mus. Parry.

In its general character this insect approaches nearest to *Heterochthes brachypterus* (Trans. Ent. Soc., 3rd Ser., vol. ii.\* pl. xi. fig. 1), but differs in its wider and more flattened form, with the head not wider than the prothorax and the elytra flatter and more cordate in form. The head and thorax are black, scarcely shining, and impunctate except at the sides, where the punctures become gradually more distinct and coarse; the front margin of the head is gradually depressed and not elevated as in *H. brachypterus*; the sides of the head, behind the eyes, have a rounded tubercle, and in the centre near the hind margin is an oval depression. The elytra are black, glossy, and under a high lens are seen to be finely punctured; their lateral margins are recurved. On the underside the head is strongly and the jugulum finely punctured. The anterior tibiæ are five-toothed on their outer edge, and the four posterior tibiæ short, unarmed and setose. The prosternum (which in *H. brachypterus* is convex in the centre, with a longitudinal impressed line on each side) is here marked in the centre with two irregular longitudinal impressions.

*Leptinopterus fraternus*. (Pl. III. fig. 3.)

Niger, subnitidus, capite magno plano, antice emarginato, postice in medio impresso et utrinque spatio glabrò punctato notato, pronoti angulis posticis oblique truncatis, disco crebre punctato, punctis setigeris; scutello nigro, nudo; elytris luteo-rufis, unicoloribus.

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\* Plates XI. and XII are mislettered Vol. I. instead of Vol. II.

Long. corp. masc. lin. 12; fœm. lin. 8; mand. maris lin. 7.

Habitat in Brasiliâ. In Mus. Parry.

This species is closely allied to *L. polyodontus*, but is slightly smaller and is at once distinguished by the flat and thin mandibles of male, the glabrous granulated patch on each side of the hind part of the head, the naked scutellum, and the uniform colour of the elytra. The mandibles of the male have a truncate tooth near the base of the inner edge, followed by a small tubercle; at one-third of their length is a small conical tooth, and at two-thirds of their length is a larger tooth, preceded by a minute tubercle, and followed by four small teeth on the right-hand mandible and by five similar ones on the left mandible. The head of the male has a distinct depression, acuminate behind; in the middle of the hind part, and on each side of this towards the posterior lateral angles of the head, is a shining, coarsely granulated space, the remainder of the head being very delicately granulated. The prothorax is slightly glossy on its upper side, covered with minute punctures, and the posterior angles are more obliquely truncate than in *L. polyodontus*. The elytra are also very delicately punctured, and on each, with a lens, are to be observed six or seven very delicate longitudinal striæ. The anterior tibiæ are serrated, the three or four terminal teeth being the largest. The middle tibiæ have a minute spine in the middle of the outer edge. The scutellum is naked and black.

The female is more shining than that of *L. polyodontus*, with larger punctures, especially on the pronotum, which is black and destitute of the slight metallic reflexion seen in that species. The scutellum is naked as in the male, and the elytra have the suture slenderly marked with black; the punctures of the elytra are more decidedly visible than in the male, and they are marked with five longitudinal striæ as in that sex.

*Odontolabis striatus*, var. (Pl. III. fig. 4.)

Deyrolle, Ann. Soc. Ent. France, 4 Sér. t. iv. 1864,  
plate 4, fig. 3.

The insect here represented is regarded by Major Parry as an extreme development of *O. striatus*. It is from

Borneo, of a black colour, slightly shining and much rubbed, but the longitudinal bands of colour formed by fine setæ are distinctly visible on the sides of the elytra, on the disk of which are also to be observed with a lens alternate longitudinal spaces thickly covered with minute punctures (each of which has doubtless emitted a fine seta now abraded), with intervening spaces almost destitute of the fine punctures; in this manner four distinct rows of fulvous setæ can be traced on each elytron. The head and thorax have also evidently been abraded. The head, instead of being transverse as in the type of *O. striatus*, is here nearly square, almost flat on the crown with the fore margin nearly straight, and projecting considerably over the base of the mandibles, the clypeus being, in fact, inflexed beneath; the sides of the head near the eyes are punctured; the mandibles are about twice the length of the head, the basal half compressed, with a large, triangular, slightly bifid tooth halfway between the middle and the apex, which is also bifid, and in the anterior curve of the lower tooth is a minute tubercle; behind the eyes the sides of the head have a small but acute incision; the prothorax has a slight lateral and posterior raised margin. The anterior tibiæ are externally armed with six teeth, of which the first is minute and placed near the middle of the outer edge; the extremity of these tibiæ is flattened, and the teeth close together, so as to appear nearly palmate. The four hind tibiæ are unarmed in the middle of the outer edge; they are ornamented with longitudinal rows of fulvous setæ. The tarsi are villose beneath. The eyes are entirely divided by the slender septum. The mentum is transverse, densely setose. The maxillæ have the outer lobe strongly setose, and the inner lobe minute and simple. The prosternum is black, glossy, and concealed behind the insertion of the forelegs, where it forms an acute prominent point. The metasternum and abdomen are impunctate, subopaque and slightly setose.

The specimen is  $13\frac{1}{2}$  lines long, and the mandibles are 6 lines long; the latter are deflexed.

*Nigidius obesus*, Parry. (Pl. III. fig. 5.)

Trans. Ent. Soc. 3rd Ser. vol. ii. p. 63.

“*N. convexus*, *brevis*, *nigerrimus*, *nitidus*; capite utrinque infra oculos auriculato; mandibulis subrecurvis, intus ad

basin processu bifido productis, extus pone medium dente parvo obtuso armatis; prothorace crebre grosseque punctato, in medio obsolete late longitudinaliter canaliculato, angulis anticis simplicibus; elytris brevibus, convexis, rugoso-punctatis, fortiter sulcatis, interstitiis lævibus."

Habitat Penang, Malacca. In Mus. Parry.

Long. corp. lin.  $7\frac{1}{2}$  (mandib. inclus.).

*Gnaphaloryx sculptipennis*, Parry. (Pl. III. fig. 6.)

Trans. Ent. Soc. 3rd Ser. vol. ii. p. 52.

Niger, opacus, undique luteo-squamulosus, mandibulis capitis longitudine, intus fere rectis, apice acutis, dente crasso interno subbasali; elytris bicostatis, interstitiis lineis elevatis et punctatis notatis.

Long. corp. (cum mandib.) lin. 8.

Habitat Nova Guinea. In Mus. Lugdunensi et D. Parry.

This species has very much the appearance of and is closely allied to *Gnaphaloryx squalidus*, Hope (*tomentosus*, Dej.), but is comparatively rather shorter, and the short thick hairs or scales with which it is everywhere clothed are of a paler colour. The head is transverse, with two slightly raised circular spaces between the centre of the occiput and the eyes, leaving a slight depression between them; the mandibles are about the length of the head, not much curved, the inner edge being nearly straight and entire, except near the base, where there is a large, strong, transverse tooth, obliquely truncate at the tip; the canthus of the eyes is more distinct and angulated in front behind the insertion of the antennæ than in *G. squalidus*; the prothorax has the lateral margins rather more convex than in that species, and the middle of the disk has a decided longitudinal impression. The elytra have the suture raised, and each has two longitudinal elevated costæ, which are thickly clothed with scales; between the suture and the first costa is one row, between the first and second costæ are three rows, and between the second costa and the lateral margin are several less distinct rows of small raised tubercles, forming striæ separated at intervals by impressions; the interstices are finely punctured and squamose at the extremity of the elytra (which are there denuded of scales), the subsutural and following striæ are seen forming deeply impressed lines, the central tubercular striæ terminating at some distance from the extremity of

the elytra. The legs are slender and squamose, the anterior tibiæ armed at the extremity on the outside with two teeth; the four posterior tibiæ are unarmed in the middle on the outside. The body beneath is but moderately squamose, the sides of the head and mesosternum being deeply punctured.

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EXPLANATION OF PLATE III.

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- Fig. 1.—*Eulepidius luridus*; 1 *a*, head seen from above; 1 *b*, eye; 1 *c*, maxilla; 1 *d*, mentum; 1 *e*, extremity.
- Fig. 2.—*Heterochthes Andamanensis*; 2 *a*, labrum; 2 *b*, mentum with tips of maxillary and labial palpi; 2 *c*, eye divided by canthus; 2 *d*, prosternum.
- Fig. 3.—*Leptinopterus fraternus*.
- Fig. 4.—*Odontolabis striatus*, var.; 4 *a*, apex of mandible; 4 *b*, eye divided by canthus; 4 *c*, maxilla; 4 *d*, mentum.
- Fig. 5.—*Nigidius obesus*; 5 *a*, mandible.
- Fig. 6.—*Gnaphaloryx sculptipennis*; 6 *a*, front of left side of the head with mandible.